Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Amendment of the Commission's Rules	)	WT Docket No. 97-81
Regarding Multiple Address Systems	)	

To: The Commission

REPLY COMMENTS OF UTC

Pursuant to Section 1.415 of the FCC's Rules, UTC, The Telecommunications Association (UTC), hereby submits its Reply to certain of the comments filed in response to the Notice of Proposed Rule Making, FCC 97-58, released February 27, 1997, in the above-captioned matter.[1] As discussed more fully herein, UTC supports the FCC's recommendation to retain the 928/952/956 MHz multiple address system (MAS) channels for licensing in private, internal use systems, but strongly urges the FCC to allocate additional MAS spectrum for use in the telemetry and control systems needed by utilities, pipelines and other critical infrastructure industries.

I. Comments Demonstrate a Current and Growing Need for Private MAS Allocations

In its Comments, UTC illustrated the many ways in which electric, gas and water utilities and natural gas pipelines depend on MAS to maintain the critical national

[1] By Order, DA 97-839, released April 18, 1997, the reply comment deadline was extended to May 16, 1997.

infrastructure and provide essential public services. Other commenters were in concurrence that there is a current and growing need for private MAS allocations. A number commenters noted the use of MAS among utilities to remotely monitor and control electrical distribution substations, line switches and capacitor banks, to track and report power consumption, and for other real-time monitoring and control over widely-scattered utility system components.[2] Similarly, the American Petroleum Institute (API) reports that MAS is used for communications between remote oil and gas exploration and production sites, for SCADA, and to extend circuits to remote pipeline pump and compressor stations.[3] These commenters indicate that their MAS authorizations are not used for commercial purposes or to provide any sort of subscriber-based service, but are critical operating tools needed to provide essential public services on a safe, efficient and reliable basis. Puget, for example, explains how its power system is tightly interconnected with all other electric utilities in the Pacific Northwest, and that maintenance of reliable communications is critical to maintaining stability and reliability of the power grid as a whole across this area.[4]

Southern California Edison confirms UTC's projection that the need for these types of communications technologies will increase as utilities expand their use of remote energy management technologies.[5] Similarly, Delmarva Power notes that modern utility operations have become increasingly dependent on the use of wireless communications

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[2] Public Service of New Mexico (PNM), p. 1; Delmarva Power and Light (Delmarva), p. 3; Southern California Edison (SCE), pp.2-3; Puget Sound Energy (Puget), p. 2; American Water Works Association (AWWA), p. 7; Washington Suburban Sanitary Commission (WSSC), p. 5.

[3] API, pp. 2-4.

[4] Puget, p. 2.

[5] SCE, p.3.

systems to gain information and control this infrastructure. Alligator Communications, a manufacturer of MAS equipment, also notes that utility deployment of MAS is expected to increase now that the technology has advanced and the cost of such automation has decreased.[6] UTC agrees with Alligator's assessment that it would be unfair, as well as unfortunate, if the FCC were to now reallocate MAS spectrum for subscriber-based services even as the needs of private users continue to grow.

II. There is Overwhelming Support for the Proposal to Retain the 928/952/956 MHz Channels for Private, Internal Use MAS Systems

The comments are overwhelmingly in support of the FCC's proposal to retain the 928/952/956 MHz MAS channels for licensing in private, internal-use systems. In addition to the utility, pipeline and petroleum users of these systems, independent engineering consultants confirm that the predominant use and licensing on these channels has been by entities needing these channels to meet their internal communications requirements.[7] Comsearch notes that based on a survey of its database and its experience in coordinating MAS frequencies, MAS spectrum is all but exhausted in many areas of the country and that even limiting the 928/952/956 MHz channels to private use will be insufficient to accommodate existing and future private user demand.[8] Another MAS frequency coordinator estimates that up to 15% of the license applications in the 928/952

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[6] Alligator, p. 4.

[7] East Bay Municipal Utility District (EBMUD), p. 8; Delmarva, p. 2; SCE, p. 2; Puget, p. 3; AWWA, and p. 10; API, p. 6; WSSC, p. 6; Comsearch, p. 2; Black & Associates (Black), pp. 3-5. API presented survey results on projected MAS use among its member companies which were very consistent with UTC's projections. See API Comments, p. 6.

[8] Comsearch, p. 2.

MHz band are filed on a speculative basis, and a large percentage are not even constructed.[9]

Radio equipment suppliers also recommend retention of these bands for private, internal use operations. Microwave Data Systems (MDS) estimates that 90% of the newly licensed systems that have actually been constructed are licensed to private users, and that by far, the majority of equipment orders it has filled are from private users to meet internal communications requirements.[10] Similarly, Itron recommends that the 928/952/956 MHz bands be preserved for non-subscriber based services, noting that there is a wide range of spectrum options available for general subscriber-based services.[11] Sensus Technologies, a provider of meter reading systems, points out that it is impractical to encourage commercial, subscriber-based operations in the private MAS bands, and that competition in these bands occurs in the choice of equipment and supplier, not through a choice of provider.[12]

UTC disagrees with CellNet's suggestion that the FCC limit private, internal use to the Power Pool channels.[13] These channels were depleted years ago and would provide no relief for private users. UTC also opposes CellNet's recommendation to permit subscriber-based licensees that are no longer eligible in the private bands to continue licensing systems in those bands for an additional two years. As noted by Delmarva, if subscriber-based MAS applicants are given the choice of securing licenses

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[9] Black, p. 3.
[10] MDS, p. 7.
[11] Itron, p. 4.
[12] Sensus, p. 3.
[13] CellNet, p. 14.

at auction or on a non-auctioned basis in existing bands, this could lead to a "spectrum grab" to the detriment of private licensees.[14]

Several commenters recommend that subscriber-based systems should be relocated from the 928/952/956 MHz bands to the 932/941 MHz band help meet the more pressing need for private, internal-use MAS channels.[15] Assuming it is possible to readily identify "subscriber-based" MAS licensees, this recommendation deserves consideration.

III. Comments Demonstrate Significant Need for Private MAS Allocations in the 932/941 MHz Band

A number of persons who filed applications for the 932/941 MHz channels during the 1992 filing windows complain that it is unfair, if not unlawful, for the FCC to renege on its promise to conduct a unified random selection process and award licenses in this band on a timely basis.[16] UTC agrees, in principle, that the FCC's actions (or rather, inaction) with respect to the 932/941 MHz applications cannot be reconciled with any notions of administrative expediency or fairness.

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[14] Delmarva, p. 2. Similar to CellNet, Radscan argues that private and subscriber-based systems should continue to have access to the 928/952/956 MHz bands. In Radscan's view, there should be no concern over the equity of allowing some subscriber-based licensees to obtain "free" licenses in these bands while others secure licenses at auction because the 928/952/956 MHz channels "are nearly saturated." Radscan, p. 12. If anything, Radscan's comments point out the hardship that will befall private users if the 928/952/956 MHz channels are not preserved for private use and if additional spectrum is not allocated for this purpose.

[15] Comsearch, p. 3; AWWA, p. 13.

[16] See, *e.g.*, Comments of Stanley I. Cohn; Fischer, Wayland Cooper Leader & Zaragoza LLP; Robert E. Ryan dba Mind Communications; and the Richard L. Vega Group.

However, these and other comments tend to confirm that the majority of applications filed for the 932/941 MHz channels were filed by persons intent primarily on securing licenses, and not on offering a subscriber-based communications service. Other commenters echoed UTC's observation that the large number of applications filed for the 932/941 MHz channels does not indicate a strong demand to provide "subscriber-based" MAS service.[17] If there was such a strong demand for subscriber-based MAS, one would have expected to see a similar trend in the 928/952/956 MHz bands, which have remained available to all types of operations over these years. Black and Associates notes that there was a brief period after the close of the filing windows for the 932/941 MHz band when a number of parties filed for subscriber-based licenses in the older MAS bands, but that "the trend appears to have finished with the licensees finding there was not a ready market for their systems and licenses."[18] Similarly, MDS reports that it received a large number of inquiries from individuals about the prospects for commercial MAS, and that these persons quickly lost interest and expressed disappointment at the false promises of "riches" that had been made to them by the application mills.[19]

Rather than attempting to salvage the applications that were filed 5 years ago for the 932/941 MHz band, UTC joins other commenters in recommending that a significant percentage of the band be allocated for exclusive licensing to private, internal communications systems, and that entities proposing subscriber-based services have access to a separate portion of these channels. In its Comments, UTC had recommended

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[17] Black, p. 4; GTECH, p. 5; MDS, pp. 2-5; AWWA, pp. 7-8; API, pp. 11-22.
[18] Black, p. 4.
[19] MDS, pp. 2-5.

that 25 channels be allocated for private, internal-use, with 5 of these channels reserved for Federal government and public safety use. AWWA recommends that 20 channels be reserved for purely internal-use MAS systems, with no less than 10 channels allocated to national critical infrastructure providers such as utilities.[20] Black and Associates recommends 15 channels for private, internal use.[21] MDS recommends 25 channels for private, with an additional 5 channels for Federal Government and public safety.[22] Similarly, API recommends 20 channels for private use.[23] Other commenters recommend that some or all of the 932/941 MHz band be reserved for private use.[24]

Notably, there is no significant expression of support for subscriber-based allocations, either in the 928/952/956 MHz band or in the 932/941 MHz allocation. The Rural Telecommunications Group asks for a set-aside for rural telephone companies and for other auction incentives for rural telcos, but it makes no argument as to the public need for this service or what service rural telcos would propose to offer. GTECH recommends that the 932/941 MHz band be designated for either subscriber-based or private services, with all licenses issued pursuant to auction. However, GTECH itself argues for more private allocations due to unavailability of channels at the 928/952/956 MHz to meet GTECH's internal communications requirements.

The comments demonstrate overwhelming need for additional MAS allocations for private, internal-use systems. The only significant difference of opinion as to

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[20] AWWA, p. 12.
[21] Black, p. 5.
[22] MDS, p. 6
[23] API, p. 25.
[24] See, *e.g.*, Comsearch, p. 4; PNM, p. 2; Puget, p. 4.

disposition of the 932/941 MHz band is found in the comments of individuals who filed applications during the 1992 filing window. Even among these commenters, there is little evidence of an actual market for MAS communications service; rather, there is a generalized complaint of unfairness in the way the FCC is proposing to treat these self-described "investors."

Based on the record in this proceeding, the FCC should allocate at least 25 channels for private, internal-use MAS.[25]

IV. Site-Specific Licensing Should Be Retained for Private MAS Systems

Private users of MAS are consistent in recommending that site-specific licensing be retained for private, internal-use MAS systems.[26] As noted by Southern California Edison, private MAS systems are deployed where they are needed, and not necessarily where population density is the greatest.[27] Although some commenters acknowledge a potential administrative benefit in allowing geographic licensing in the private MAS bands, it is also conceded that this would create coordination difficulties and the potential for increased levels of interference, as well as a greater potential for mutually-exclusive applications and attendant delays in initiating service.[28]

At the same time, to the extent the FCC does authorize geographic licensing in some portion of the 932/941 MHz band, most persons commenting on this issue

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[25] UTC supports the FCC's proposal for a 5-channel set-aside for "public safety" use, even though the Association of Public Safety Communications Officials (APCO) concedes that there is little current demand among public safety agencies for access to MAS spectrum.

[26] Black, pp. 6-7; CellNet, pp. 21-22; Itron, pp. 3-4; GTECH, p. 6; PNM, p. 2; Delmarva, pp. 4-5; SCE, p. 3; Sensus, p. 5; MDS, p. 8; Puget, p. 3; AWWA, p. 11; API, p. 30; WSSC, p. 7.

[27] SCE, p. 3.

[28] PNM, p. 2; CellNet, pp. 21-22; API, p. 30.

recommend that licenses not be awarded on a nationwide or regional basis, and that the geographic licensing areas be smaller than Economic Areas (EAs).[29] UTC agrees. The record in this proceeding indicates no significant interest in the development of subscriber-based MAS services, so if geographic-area licensing is to be authorized at all, it only makes sense to structure this licensing to the needs of those entities who have demonstrated the strongest need for this spectrum; *i.e.*, private system users.

V. Private MAS Allocations Should Be Retained for Primarily Fixed, Point-to-Multipoint Operations

The comments were overwhelmingly supportive of retaining the MAS bands for primarily fixed, point-to-multipoint operations.[30] There is a need for mobile master operations for meter reading applications, but authorization of mobile remotes would fundamentally alter the character of the MAS spectrum. A number of commenters pointed out that a significant amount of spectrum has recently been allocated for commercial mobile service, while the pool of available spectrum for fixed services has been depleted. Likewise, there are spectrum alternatives for point-to-point operations, but very little spectrum has been allocated for point-to-multipoint. Black & Associates further notes that mixing point-to-point and point-to-multipoint in the same band is a "recipe for intra-service harmful interference."[31]

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[29] Black, p. 5; CellNet, pp. 24-25; GTECH, p. 6; MDS, p. 10; AWWA, p. 14

[30] Black, p. 2 & 8; Alarm Industry Communications Council (AICC), p. 5; GTECH, p.7; PNM, p.2; MDS, pp.12 & 14; Puget, p. 4; AWWA, pp. 17, 19-20.

[31] Black, p. 8.

VI. Incumbents Should Be Protected In Any Bands That Are Allocated for Geographic Licensing

To the extent the FCC authorizes geographic licensing in already encumbered bands (*e.g.*, the 928/959 channels), the commenters argue strongly for sufficient protection to incumbent systems. UTC agrees the commenters who point out that a 25-mile protection zone for incumbent systems is insufficient.[32] MAS systems are not limited to operating in an assumed 25-mile service area, and sufficient flexibility must be afforded to incumbents to modify their systems to meet evolving needs. UTC also agrees with Delmarva that the FCC should clarify the coordination requirements for geographic area licensees.[33]

VII. Conclusion

Aside from comments filed by individuals who feel betrayed by the FCC's decision to reverse course on future licensing of the 932/941 MHz MAS channels, the overwhelming consensus is that the current 928/952/956 MHz MAS channels should be retained for private, internal use and that a majority of the channels in the 932/941 MHz band should be allocated for private, internal-use systems. Despite the FCC's tentative conclusion that there is a strong, pent-up demand for subscriber-based MAS services, such demand failed to materialize in this docket. To the contrary, the record is clear that MAS serves unique communications needs of utilities, pipelines, petroleum companies

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[32] Black, p. 8; CellNet, p. 26; GTECH, p. 7; ProNet, p. 8; AWWA, p. 15; WSSC, p. 8.

[33] Delmarva, p. 6. Such concerns are highlighted by PNM, which related a severe interference problem into its system from another licensee who had relocated (without prior FCC authorization) within 1/4 mile from PNM's adjacent channel master station. See PNM Comments, p. 2.

and other organizations. UTC therefore urges the FCC to promptly adopt rules that will ensure an ample supply of MAS channels to meet these strong and growing needs, as the FCC committed when the 932/941 MHz channels were allocated.

WHEREFORE, THE PREMISES CONSIDERED, UTC respectfully requests the FCC to take action in this docket consistent with the views expressed herein.

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